Right to Water Versus Water Rights: Some Key Challenges Faced by Developing Countries in Developing Water Infrastructure

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Abstract

Access to water is now officially recognised as a basic human right. Right to water should ideally include a variety of dimensions such as access to water, affordability, ownership, delivery, and participation in decision-making processes. Unfortunately, this right is often misunderstood in developing countries. The public demand for free or heavily subsidised water hampers the ability to develop efficient water infrastructure facilities, which often requires engaging the private sector and introduction of market mechanisms. This paper is based on an ongoing research project which aims to conduct detail studies of different water governance architectures in the world and water infrastructure projects that have failed due to public protests and opposition in various countries, presents some preliminary findings and offers a brief discussion on the challenges faced by developing countries in treating water as an economic good.

Key words: water scarcity; human rights; developing countries

1. Introduction

Water is an essential element for life on earth. Whilst agriculture remains the residual user of water, the existing high and growing demand for water comes from high-value uses such as drinking water and sanitation, industry, navigation, amenity use and the natural environmental demands for water. The focus of this paper is on the availability of drinking water and the impact of the recognition of water as a human right on the need for water infrastructure facilities in developing countries.

According to the United Nations Children's Fund (UNICEF, 2010), 884 million people around the globe have no access to clean, drinkable water. According to the WHO (2006), over 1.1 billion people do not use drinking water from improved sources such as safe pipelines, while 2.6 billion lack basic sanitation. Thus, it is not surprising that access to clean drinking water is now an official human right after 122 of the 163 UN member states present voted for its approval in July 2010.

Even before the said resolution, right to water has been recognized in many other international conventions. For example, the Universal Declaration of Human Rights (1948) declared that everyone has a right to a standard of living adequate for the health and wellbeing of himself and his family including food, clothing and housing, thus implicitly recognising the right to water. The International Covenant on Civil and Political Rights (1966) recognised that water is the key resource of subsistence of all living forms. In 2002, the United Nations Committee on Economic, Cultural and Social Rights declared access to water a human right, stating inter alia that water is a social and cultural good, not merely an economic commodity. The Committee stressed that the countries that have ratified the International Covenant on Economic, Social and Cultural Rights are obligated to progressively ensure access to clean water, "equitably and without discrimination" (WHO, 2005). As the former Secretary General of the UN had stated (WHO, 2003):

> *"Access to safe water is a fundamental human need and, therefore, a basic human right. Contaminated water jeopardizes both the physical and social health of all people. It is an affront to human dignity."*

Further, at the heart of the Millennium Development Goals of the United Nations, access to water is recognized as central to achieving progress on all fronts of development.

Right to water should ideally include a variety of dimensions such as access to water, affordability, ownership, delivery, and participation in decision-making processes. Having a formal human right to water is important as it could help shed focus on certain questions such as government obligations to the people, setting priorities for water policy, identifying minimum water requirements and allocation of water. However, the right to water is an often misunderstood concept in many developing countries. Whilst the need for water and the provision of water are core concerns for all countries, achieving water security requires substantial financial and technical inputs. This makes it increasingly difficult for the developing country governments to stretch scarce public funds to cater to the demand for water infrastructure facilities. When right to water is misunderstood or misinterpreted as a right to free water or heavily subsidised water supply by governments, it hampers the ability to develop modern and efficient water infrastructure facilities, which often requires engaging the private sector partners and introducing market mechanisms to increase the efficiency of water governance.

In the circumstances, it is important to clear the misconception that right to water although is a basic human right, it does not and should not guarantee free water. The better option is to recognise that people have water rights, for example demand that they be provided access to safe water at a reasonable and affordable cost. In fact in July 2010, when the UN general assembly declared that access to clean water and sanitation is a human right, the it was qualified soon by the statement that it is a "misconception that rights entitle people to free water; instead, water and sanitation should be clean, accessible and affordable for all" (UN, 2010).

2. Understanding the Water Crisis and the Recognition of Right to Water

It has been estimated that the total volume of the earth's water is 1.4 billion km^3, of which freshwater accounts for only 35 million km^3 (2.5 percent), the rest being salt water covering the world's oceans (Shiklomanov, 1999). Of the 2.5 percent freshwater available, more than two-thirds is trapped as glaciers and permanent snow cover, leaving only less than one-third in the form of extractable groundwater and surface water. Thus, the total volume usable freshwater supply for humans and ecosystems is 200,000 km^3, which is only 0.01percent of all the water on earth (Gleick, 2003; Shiklomanov, 1999). It is also important to note that these available freshwater resources are not equitably spread across the world. Whilst some countries having abundant supplies of water, others are face severe shortages.

According to Malin Falkenmark, a Swedish hydrologist, who pioneered the concept of 'water stress index' based on an approximate minimum level of water required per capita to maintain an adequate quality of life in a moderately developed country in an arid zone, 'water stress' is said to occur when the annual supply of freshwater is less than 1700 m^3/person, while 'water scarcity' is defined as the situation when the annual supply of freshwater drops below 1000m^3/person (Falkenmark et al., 1989). Today, the water crisis in the world is staggering with over 1.1 billion people (approximately 18%) of the world population, lacking access to safe drinking water (WHO/UNICEF, 2005). It is also predicted that by the year 2025, close to 1.8 billion people will be living in countries or regions with absolute water scarcity, and two-thirds of the world population could be under stress conditions (FAO, 2010).

The scarcity of water underlines the need to conserve water. Conservation of water resources is one of the important aspects in ensuring sustainable development of cities and should incorporate environmental, social as well as economic dimensions in it. Chapter 18 of Section II of Agenda 21, the action plan of the United Nations (UN) related to sustainable development, which is an outcome of the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, in 1992, talks about the 'Protection of the Quality and Supply of Freshwater Resources', highlights the importance of equitable access to adequate freshwater as a vital component of life, while preserving the earth's ecosystems. Under its recommended activities, it specifically encourages countries to "promote schemes for rational water use through public awareness-raising, educational programmes and levying of water tariffs and other economic instruments", as well as "promote water conservation through improved water-use efficiency and wastage minimization schemes for all users, including the development of water-saving devices".

Whilst the scarcity of water as a natural resource underlines the need to conserve it, water being an essential element for life on earth underlines the reason for its recognisition as a fundamental human right. As noted above, the right people should be entitled to over water should ideally include a variety of dimensions such as access, affordability, ownership, delivery, and public participation water

governance. In this context, it is better to differentiate the right water from other universal human rights such as right to equality and right to life. This because water being a natural resource or a public good, has always remained and will continue to remain with the people. However, in facilitating the use of water by the people, the facilitator, often a public sector entity, incurs substantial costs in transporting water to provide safe access to people, in developing the necessary infrastructure and putting together an administrative framework to govern water. Such costs need to be directly or indirectly recovered from the users. Thus ideally, there should not be any guarantee of free water to people.

In the circumstances, right to water should be recognised rather as a water right enjoyed by the users. According to the FAO (2006), there is no universal definition for the term "water rights". This is because water law, and thus, water rights, reflect economic, social and cultural perceptions of water. Such perceptions are shaped by a range of factors including geography, climate and the extreme variability in the availability of water resources as well as the uses for water. For example, in more temperate climates, primary uses may include navigation, hydropower and recreational uses with public concerns focus on excessive quantities of water in rivers and streams, and the risks of flooding. In more arid climates, irrigation is necessary with concerns of water scarcity and levels of rainfall. Moreover, each country faces unique water issues. This observation combined with the dynamic complexities of the qualitative and quantitative aspects of the hydrologic cycle, human intervention in that cycle and the many historical, social, ecological, economic and political circumstances that influence the use of water resource, makes it clear that water rights people enjoy, whilst having basic requirements such as accessibility and affordability, could be diverse from country to country and region to region.

The need for water and the provision of water are core concerns for all countries. Thus the water users in each country having recognised water right is important as it could help shed focus on certain questions such as government obligations to the people, setting priorities for water policy, identifying minimum water requirements and allocation of water (Calaguas, 1999). Achieving water security consists of holding baseline access to sufficient quality water to meet basic needs. In addition, it also requires ensuring access to water for productive purposes, like agricultural and industrial uses. Thus, from the point of view of ensuring that the right to water is actualized, the institutional mechanisms put in place to undertake delivery of various water services such as purification, distribution, sanitation, and sewerage are critical.

3. Could Water be treated as an Economic Good?

3.1 Changing Perceptions on Water Governance

Conventionally, all most all of the water infrastructure was invested, administered and governed by public sector entities. This is mainly because of the peculiar characteristics of water such as a high degree of natural monopoly, high capital intensity and the presence of sunk costs, the multipurpose and hydrologically interconnected nature of the water resource itself, as well as the perception that public provision is the best way to guarantee universal access (Metha, 2003).

Public management of water is advocated on several grounds. One argument in favour of public management of water is that water is a public good and public water utilities have better public support. Another argument is that public sector management is capable of preventing exploitation of consumers by profit driven private entities. There is a wealth of experience and knowledge within the public sector given that vast majority of water operators in the world are in the public sector, is another ground on which public management is supported. Further, in some cases, it is argued that this model thrives or is strongly supported due to political reasons such as the fear of public criticism for removing heavy state subsidies for water and privatisation of water utilities (Gunawansa & Bhullar, 2011).

According to Fauconnier (1999):

> *"Until the late 1970s, the public sector was considered to be in the best position to provide water supply and sanitation…….Since the late 1970s, however, conventional wisdom has*

shifted in light of the weak performance of many publicly owned and operated utilities around the world."

According to her, public sector management practices have resulted in low cost recovery, low productivity, low productivity, high debts, and eventually low service quality and coverage. They have also received much more adverse publicity than in the past. This view is strongly supported extensively by some economists. For instance, Vickers and Yarrow (1991) pointed out that privatization changes the objectives of the firm's ultimate owners, the possibilities of government intervention, and ways of monitoring managerial performance, and stated that empirical evidence does point towards improved efficiency following the engagement of private sector for development and management of water utilities and provision of the related services to end-users. They have cited cases from Britain, Chile and Poland to support their argument.

Thus, although historically, water utilities have been under state monopolies, with governments feeling the stress of stretching the scarce public funds to deal with increasing demand for new and modern infrastructure facilities whilst also performing the other fiscal duties expected of modern welfare governments, the need to find alternative mechanisms to finance and develop water infrastructure has gained recognition. Further, the poor performance of public water utilities attributable to several factors including low service coverage, high unaccounted-for water, overstaffing, and financial problems due to a combination of low or no tariffs, poor consumer records and inefficient billing and collection practices, has resulted the role of the public sector in water management being challenged at local, national and international levels (Gunawansa, 2011). Consequently, the use of alternative governance mechanisms that enable the public sector entities to partner with private sector entities in developing, managing and providing water services to the people is slowly becoming the norm.

3.2 Recognition of Water as an Economic Good

Traditionally, in all legal systems, there has been no interest in granting private rights for the use of natural resources which were thought to be abundant enough and thus not have any economic value (Solanes & Gonzalez-Villarreal, 1999). The thinking has changes as far as water is concerned with the growing recognition that it's a scarce resource. Further, with the growing recognition that public sector utilities can no longer, by themselves, develop and manage water utilities and provide the related services to the end-users, the need to price water has been acknowledged. This is because no private sector entity is likely to participate in a water related project unless the project is commercially viable.

The Dublin Statement on Water and Sustainable Development (also known as the Dublin Principles) which was adopted by the United Nations on the 31st of January 1992 at the International Conference on Water and the Environment held in Dublin, Ireland, which was the last technical preparatory meeting before the UN Conference on Environment and Development (UNCED, also known as the "Earth Summit") held in Rio de Janeiro in 1992, recognised the increasing scarcity of water and declared water a finite natural resource with economic value. Thus, Principle 4 of the Dublin Statement provides:

> *Water has an economic value in all its competing uses and should be recognized as an economic good. Within this principle, it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price. Past failure to recognize the economic value of water has led to wasteful and environmentally damaging uses of the resource. Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.*

Agenda 21, an action plan on sustainable development which was agreed to at the UNCED, provides in Chapter 18 that :

> *Water should be regarded as a finite resource having an economic value with significant social and economic implications regarding the importance of meeting basic needs*'

Thus it could be said that there is general international acceptance that water could no longer be treated as a free service that governments should provide for the people. It has been recognised that water has an economic value and when pricing water, factors such as public right to access to water, the need to maintain affordability, and reduction of wastage, needs to be taken into consideration.

The various international declarations made after the Dublin Statement and UNECD confirm this. For example, the Ministerial Declaration of the 2nd World Water Forum organised by the World Water Council which was held in the Hague in 2000, declared *inter alia* that:

> *To manage water in a way that reflects its economic, social, environmental and cultural values for all its uses, and to move towards pricing water services to reflect the cost of their provision. This approach should take account of the need for equity and the basic needs of the poor and the vulnerable.*

Ministerial Declaration of the 3rd World Water Forum held in Kyoto in 2003 declared *inter alia* that:

> '*Funds should be raised by adopting cost recovery approaches which suit local climatic, environmental and social conditions and the "polluter-pays" principle, with due consideration to the poor. All sources of financing, both public and private, national and international, must be mobilized and used in the most efficient and effective way.*'

According to Indian scientist and activist, Vandana Shiva (2006), one major concern relating to promoting water as an economic good is that it would lead to increased control of water by multinational corporations, which might result in the poor being shut out, because the MNC's are not interested in supplying water as a public service, as their main responsibility is to shareholders and to increase profit.

3.3 Meeting the Challenge of Pricing Water

Water has two essential qualities for it to be treated as a commodity, a ready market, due to the need for water for human survival and its scarcity, and the cost involved in developing water facilities and enabling public access to water. Whilst, the need for water as a basic human need would allow some to argue that water is a right of the people and provision of free water is duty of governments, the cost involved in development and provision of water facilities supports the argument that whilst access to clean water could remain a human right and a public duty, pricing of water is inevitable.

Water as a commodity has worked in several countries, both developed and developing. For example, in the United Kingdom and Singapore, water is a commodity purchased by the users for both household needs and industrial purposes. Whilst in the United Kingdom, water facilities are developed, managed and the related services are provided to the users, by the private sector, in Singapore water is still fundamentally governed by the Public Utilities Board (PUB), the public sector entity in charge of water (Gunawansa & Bhullar, 2011). On the other hand treating water as a commodity is still a sensitive issue in many countries, especially those considered as developing countries. For example, in December 2001, a water contract with a private sector entity, Nkonkobe (Fort Beaufort), was nullified in South Africa for failing to secure the consent of the municipality in which the project was to be developed (Mxotwa, 2001). Likewise, in 2002, the city council of Poznan, Poland, unanimously rejected a water privatisation proposal. In the same year, a motion for the proposed privatisation of a state public utility was defeated in the Paraguayan parliament with an overwhelming majority (Business News Americas 2002).

The major concern noted above that the treatment of water as an economic good may lead to increased control of water by multinational corporations, although is a serious concern, is not a problem that cannot be resolved. The concern of poor being marginalised could be addressed by having an efficient and effective water governance architecture which regulates the water prices and uses measures such as water subsidies and structured pricing based on number of household occupants and income level. For example, South Africa has introduced a household monthly allocation via its free basic water subsidy programme which allows for basic sanitation, cooking and drinking water, while charging the full cost of the infrastructure for additional use (Brabeck-Letmathe, 2010).

Further, irrespective of the engagement of the private sector for development, management and provision of water related services, it is important for the public entities to regulate the water prices to ensure that whilst maintaining water as an economic good, it remains affordable to the end-users. Ofwat, the economic regulator of the water and sewerage sectors in England and Wales seems to be doing just that. According to Ofwat, every 5 years the water companies suggest new prices and these prices are then reviewed by Ofwat who then decide on a price to suit both the water companies and the consumer (Ofwat, 2004). During the 2004 review, although the water companies suggested a 29% increase, Ofwat decided on an average 18% increase for the 5 year period from 2005.

Public education of the need for pricing water and the fact that what users have to pay for water services is a minuscule per cent of household income would also help manage the criticism and opposition to treating water as a commodity. According to Smets (2008), in industrialized countries, households with an income equal to the median disposable income generally spend around 1.1% of their income for their water and sanitation bill. Poor households spend on average approximately 2.6% of their income. By and large, the State practice in industrialised countries supports the choice of an affordability index of 3 to 4% of disposable income of poor households. Thus, it seems that, at least in the industrialised countries, water as a commodity is affordable.

When it concerns developing countries however, it is important to be mindful that the poor may lack the capacity to afford water as an economic good. Of the approximately 200 countries in the world, only 25 countries are recognised as developed or "First World" countries. The rest are considered developing or least developed. There are 48 countries listed in the United Nations comparative analysis of poverty (UN-OHRLLS, u.d.). Of these, in 16 countries the average annual income earned by a citizen is less than US$ 1000 (based purchasing-power-parity (PPP) per capita) (IMF, 2005). If we compare the daily spending power of a citizen in one of these countries, for example, Malawi, it is only US$ 1.6 a day compared to what an average US citizen spends in a day, which is approximately US$ 114. Thus, it is not difficult to conclude that although water should be treated an economic good; affordability of water in the poorer countries remains a concern.

It is also important to note that when the water supply infrastructure systems in countries/cities are deficient, the poor are the first to suffer. The result is that those who do not benefit from an efficient house connection will be often forced to purchase water from private vendors at a higher price that what should be the reasonable cost of using water from a house connection. The table below shows house connection prices versus the price paid private vendors in five randomly selected cities in developing countries:

City	Cost of water for domestic use from a house connection: 10 m^3/month) in US$/$m^3$	Price of water purchased from private vendors in US$/$m^3$
Delhi (India)	0.01	4.89
Karachi (Pakistan)	0.14	0.82
Dhaka (Bangladesh)	0.08	0.42
Bangkok (Thailand)	0.16	1.62
Ulaanbaatar (Mongolia)	0.04	1.51

Source: information extracted from *Second Water Utilities Data Book, Asian Development Bank, 1997*.

4. Challenges Faced by Developing Countries

According to the UN, world population that was 6 billion in 2000 might increase by approximately 2 billion by the year 2025 (UN, 2008). It is predicted that by 2050 the world population might increase up to 11 billion. According to the same source, almost all future population growth will occur in the developing world. This would result in a massive increase of the number of people living in the urban cities in the developing countries. Thus the water crisis is more severe in the developing countries.

With the rising population levels, the demand for infrastructure facilities will go up. Further, as population increases and development calls for increased allocations of water for the domestic, agriculture and industrial sectors, the pressure on water resources would intensify, leading to

tensions, conflicts among users, and excessive pressure on the environment (FAO, 2010). Thus, developing countries will struggle to satisfy the public demand for infrastructure facilities in sectors such as water.

It is important for developing countries to ensure that people have access to safe water. It is also not debated that providing such access would require the development of infrastructure facilities and that such development activities would require sufficient funds, technology and management skills. Although engagement of private sector is a solution, it has been argued above that the commercial viability of such projects would determine the private sector participation. Thus, striking a sustainable balance between treating water as an economic good and maintaining affordability for the people is a key challenge for developing countries.

In the circumstances, when water is priced in developing countries, some key questions need consideration: What is the cost incurred by the supplier when supplying water to the end-users? Can that cost be met with public funds and the necessary developments be done and managed by public entities? What are the technological constraints faced by the public entities in doing that? If public entities are incapable of such developments, what sit eh cost of attracting private sector investors or partnering with them to develop the relevant projects? If the private sector is engaged, what profit margins should they be reasonably allowed? If the private sector is engaged, at what price can water be sold to the people?

Conclusion

Despite the recognition of right to water as a basic human right and the central role played by water in sustaining life, a gap between political intent in recognising the right to water and practical outcomes in delivering water to the people often exists. The key reason for this is the public demand for clean and accessible water for free or at a low cost and the high cost and the complex technologies required for developing such facilities, which are often beyond the affordability of developing countries.

In the circumstances, improvements are needed in three aspects of water governance and management, namely, legislation, implementation, and financing. Such improvements should ideally lead to the development of a policy and legislative architecture that could provide an ideal framework for sustainable development of water infrastructure, its management and governance. The developing country governments need to be innovative in their approaches in introducing regulatory mechanisms that facilitate private sector engagement in the water sector, whilst controlling the economic value of water to maintain affordability for the people. In the meantime, the water policy should take on the challenge of educating the people and encouraging people participation in the conservation of water as a measure for addressing water scarcity as well as a measure for dealing with affordability. Factors such as diverse economic development in different regions with the countries concerned and the income levels of families and the number of people living in a household may have to be taken into consideration to introduce effective pricing mechanisms that could address the issue of affordability for the people as well as commercial viability of water for those who invest in water utility projects.

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